

WHAT IS CLAIMED IS:

1. A photoelectric conversion apparatus comprising:

photoelectric conversion elements arranged on a plurality of rows;

amplification means, including load means arranged in units of vertical output lines, for amplifying signal charges accumulated in the photoelectric conversion elements arranged in the plurality of rows;

vertical scanning means for sequentially scanning signals amplified by said amplification means to read the signals onto the vertical output lines; and

horizontal scanning means for sequentially scanning the signals amplified by said amplification means to read the signals onto horizontal output lines,

wherein said load means are located on a side vertically opposite to a direction of signal output from said amplification means.

2. An apparatus according to claim 1, wherein said amplification means is a MOS source follower circuit, and said load means serving as a load of said source follower circuit is a constant current source.

3. A photoelectric conversion apparatus comprising:

photoelectric conversion elements arranged on a

plurality of rows;

amplification means, including load means arranged in units of vertical output lines, for amplifying signal charges accumulated in the photoelectric

5 conversion elements arranged in the plurality of rows;

vertical scanning means for sequentially scanning signals amplified by said amplification means to read the signals onto the vertical output lines; and

10 horizontal scanning means for sequentially scanning the signals amplified by said amplification means to read the signals onto horizontal output lines,

wherein said load means are located on vertically the same side as a direction of outputting the signals from said amplification means, and some of the signals  
15 from said amplification means are output in an opposite direction to the direction of signal output.

4. An apparatus according to claim 3, wherein the signals from said amplification means are output in  
20 opposite directions in units of columns or in units of a plurality of columns.

5. An apparatus according to claim 3, wherein  
signals between adjacent photoelectric conversion  
25 pixels are averaged.

6. An apparatus according to any one of claims 3

to 5, wherein said amplification means is a MOS source follower circuit, and said load means serving as a load of said source follower circuit is a constant current source.

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7. A photoelectric conversion apparatus comprising:

photoelectric conversion elements mounted on a plurality of rows;

10 amplification means for amplifying signal charges accumulated in said photoelectric conversion elements arranged in the plurality of rows;

15 vertical scanning means for sequentially scanning signals amplified by said amplification means to read the signals onto the vertical output lines;

horizontal scanning means for sequentially scanning the signals amplified by said amplification means to read the signals onto horizontal output lines; and

20 power supply means for supplying power supply voltages to said amplification means,

wherein ones of said power supply means are located on a side vertically opposite to a direction of signal output from said amplification means.

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8. An apparatus according to claim 7, wherein said power supply means are located on vertically

9. An apparatus according to claim 7, wherein signals between adjacent photoelectric conversion pixels are averaged.

wherein one terminal of said reset means is connected to said power supply means.

photoelectric conversion elements mounted on a plurality of rows;

vertical scanning means for sequentially scanning the voltage signals from said output means to read the voltage signals onto vertical output lines;

horizontal output means for sequentially scanning  
25 the voltage signals on the vertical output lines to  
read the voltage signals onto horizontal output lines;  
and

shading correction means for correcting shading resulting from a voltage signal level difference between said photoelectric conversion elements on different rows, which is output from said output means.

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12. An apparatus according to claim 11, wherein said shading correction means includes current output means for outputting, onto a vertical output line, a signal in a direction opposite to a direction of outputting a signal output from said output means.

13. An apparatus according to claim 11, wherein said shading correction means includes signal level adjustment means for reversing, in units of arbitrary columns, a direction of a vertical signal level difference of signals between different rows output from said output means.

14. An apparatus according to claim 11, wherein said shading correction means includes power supply voltage supply means for reversing, in units of arbitrary columns, a direction of vertically reducing a power supply voltage supply amount for outputting a signal from said output means.

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